

**KINGTECH ENTERPRISES LIMITED**

ROOM 2016, 20/F., BLOCK B, REGENT CENTER, 70 TA CHUEN PING ST., KWAI CHUNG, N.T. HONG KONG  
TEL : 852-24810188 FAX : 852-24253939

**510(K) SUMMARY**

for KINGTECH Digital Thermometer, TT1001

This summary of 510(K) safety and effectiveness information is being submitted in accordance with the requirements of 21 CFR 807.92.

The assigned 510(K) number is: K 133111

**Submission Date:** September 21, 2013

**Submitter:** Kingtech Enterprises Limited  
Room 2016, 20/F., Block B, Regent Center 70 Ta Chunen Ping  
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**Manufacturer:** Kingtech (Dong Guan) Enterprises Limited  
Farm Village, Da Ling Shan Town, DongGuan, China  
Tel: +86-76985636260 Fax: +86-76985636350

**Establishment  
Registration No.:** 3008808166

**Official Contact:** Dr. Jen, Ke-Min  
Tel: +886-3-5208829 Fax: +886-3-5209783  
Email: ceirs.jen@msa.hinet.net

**Common /  
Usual Name:** Digital Thermometer

**Trade Name:** KINGTECH Digital Thermometer, TT1001

**Classification  
Code:** FLL, Class II, 21 CFR 880.2910

**Intended Use:** TT1001 Digital Thermometer is intended to measure the body temperature orally and to be used by medical professionals in clinical and hospital environments and consumers in a home environment. It is intended for use on people of all ages.

**Predicated  
Devices:** KI22520, TaiDoc Digital Thermometer, TD-1001  
TaiDoc Technology Corporation

**Device Description:** The Digital Thermometer TT1001 enables easy and accurate readings over the body temperature range. It must be used in conjunction with disposable probe cover when taking temperature. From the construction point of view, the digital thermometer comprises of a thermistor for measuring sensor, a reference resistor for comparison of temperature, a buzzer for sounding effect, an ASIC for calculating, and LCD for displaying the measuring temperature digitally for which the thermistor contacts.

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## **Test Principle:**

The Digital thermometer TT1001 is the electronic thermometer operated by a thermistor as the temperature sensor and an ASIC (Application Specified IC) for signal processing. The basic operation principle is that a change of thermistor, caused by changes of temperature, provide signal to ASIC. ASIC gets the sensor's signal then processes the signal and calculates the result, after that displays the temperature result by a LCD.

## **Performance Tests:**

### **Safety Test:**

- IEC 60601-1 – Medical electrical equipment Part 1. General requirements for safety, 2005.

### **Electromagnetic Compatibility Test:**

- EN/IEC 60601-1-2 – Medical electrical equipment, Part 2. Electromagnetic compatibility – Requirements and tests, 2007.

### **Biocompatibility Tests:**

- ISO 10993-5:2009, Biological evaluation of medical devices – Part 5: Tests for in vitro cytotoxicity.
- ISO 10993-10:2010, Biological evaluation of medical devices – Part 10: Tests for irritation and skin sensitization.

## **Clinical Tests:**

In accordance with:

EN12470, ASTM E 1965-98, and ASTM E1112-00

## **Comparison and Conclusion:**

This 510k submission only need change the application name of the predicate K122520 from “TaiDoc Digital Thermometer, TD-1001” to “KINGTECH Digital Thermometer, TT1001”; there is the entire identical specifications and only need to separate into different 510k. And all of the test reports and documentation for this 510k submission were prepared by TaiDoc Technology Corporation and BioCare Co., Ltd. who is a branch office of TaiDoc Technology Corporation.

Thus the new device is substantially equivalent to the predicate devices in this aspect.



Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center – WO66-G609  
Silver Spring, MD 20993-0002

December 26, 2013

Kingtech Enterprises Limited  
C/O Dr. Ke-Min Jen  
Official Correspondent  
Room 2016, 20/F., Block B, Regent Center  
70 Ta Chunen Ping Street  
Kwai Chung, New Territories  
HONG KONG

Re: K133111

Trade/Device Name: KINGTECH Digital Thermometer TT1001  
Regulation Number: 21 CFR 880.2910  
Regulation Name: Clinical electronic thermometer  
Regulatory Class: II  
Product Code: FLL  
Dated: September 21, 2013  
Received: September 30, 2013

Dear Dr. Jen:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA).

You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

**Kwame O. Ulmer**

-S

for

Erin I. Keith, M.S.  
Acting Director  
Division of Anesthesiology, General Hospital,  
Respiratory, Infection Control and  
Dental Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

**Indications for Use**

510(k) Number (if known)  
K133111

Device Name  
KINGTECH Digital Thermometer, TT1001

**Indications for Use (Describe)**

TT1001 Digital Thermometer is intended to measure the body temperature orally and to be used by medical professionals in clinical and hospital environments and consumers in a home environment. It is intended for use on people of all ages.

Type of Use (Select one or both, as applicable)

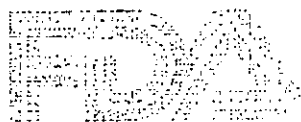
☐ Prescription Use (Part 21 CFR 801 Subpart D)

☒ Over-The-Counter Use (21 CFR 801 Subpart C)

**PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.**

**FOR FDA USE ONLY:**

Concurrence of Center for Devices and Radiological Health (CDRH) (Signature)



Digitally signed by Richard C.  
Chapman

Date: 2013.12.26 11:36:46 -05'00'

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